Applicants argue that Chatterjee fails to teach hot isostatic pressing at any point. Chatterjee cites prior art that recognizes hot isostatic pressing, but does not apply that technology to the teachings. Further, that Chatterjee fails to teach an implantable stabilized tetragonal zirconia polycrystal ceramic. Chatterjee therefore fails to teach low-temperature degradation of stabilized tetragonal zirconia polycrystal and fails to teach a solution to overcome this degradation of implanted stabilized tetragonal zirconia polycrystal.

Combining Chatterjee with Whitehurst does not cure these deficiencies. Whitehurst's assignee, Advanced Bionics Corporation, is in a joint development program with the Alfred Mann Foundation and Advanced Bionics Corporation is the licensee of the Bion technology developed by the Alfred E. Mann Foundation, assignee of Applicants' patent that is at issue here. Advanced Bionics was taught the materials that are improved by Applicants' teachings. Advanced Bionics was unaware of the use of this subject material in a Bion case until taught by this invention application.

Whitehurst does not teach stabilized tetragonal zirconia polycrystal ceramic and only mentions "ceramic" material in a generic, casual manner without any teaching of materials selection or any limitation. Whitehurst does not remedy the failures of Chatterjee.

The independent claims 1, 10, 19, and 23 are allowable over Chatterjee and Whitehurst. The dependent claims are allowable as further limitations on allowable independent claims.

CLAIMS

The claims are resubmitted without amendment to facilitate their review.

DISCUSSION

Claims 1-3, 5-7, 10-16, 19, 23, 25, and 26, as well as claims 20 and 21, are rejected under 35 USC 103(a) as being unpatentable over Chatterjee, et al. (US Pat. no. 5,677,072) in view of Whitehurst, et al. (US Pat. no. 6, 735,475).

These objections on new grounds reject independent claims 1, 10, 19, and 23 as well as several dependent claims. The dependent claims are allowable as further limitations on allowable independent claims and are not discussed separately herein.

Chatterjee does not anticipate Applicants' invention and the failures of Chatterjee are not remedied by Whitehurst, a licensee of Applicants' invention. Chatterjee does not disclose a method "...comprising the step of hot isostatic pressing said ceramic..." contrary to Examiner's statement [Office action at page 3, no. 5 first paragraph]. Chaterjee never mentions, and never teaches, hot isostatic pressing. It follows that Chatterjee does not teach hot isostatic pressing parameters, contrary to the Examiner's statement,

> "In regard to claims 1, 10, 13, 19, and 23, Chatterjee et al. disclose a method for producing a long-lived, stabilized tetragonal zirconia polycrystal ceramic, col 2 lines 24-27 and col 4 lines 46-50, comprising the step of hot isostatic pressing said ceramic at a controlled temperature, at a controlled pressure, col 7 lines 25-32 and lines 38-48, and in a controlled atmosphere to achieve an average grain size of less than about 0.5 micron col 4 lines 29-34...." [Office action at page 3, no. 5 first paragraph] [emphasis added]

This citation to Chatterjee, whose invention is titled "Zirconia Articles Having Tetragonal Cores and Monoclinic Cases and Preparation and Sintering Methods" [emphasis added] are specifically directed to conventional sintering of zirconia. Specifically, Chatterjee says,

> "Sintering is conducted in air or other oxygen containing atmosphere. The zirconia adjunct, is in contact with the blank during sintering. The methods of the invention are not limited to any particular sintering pressure and temperature conditions. Sintering can be performed at atmospheric pressure or alternatively a higher pressure can be used during all or part of the sintering to reduce porosity." [Chatterjee, col 7, lines 19-25] [emphasis added]

The Examiner finds that Chatterjee teaches a remedy to the low-temperature degradation of stabilized tetragonal polycrystal ceramic despite the failure by Chatterjee to either recognize the problem of low-temperature degradation [probably because the application addressed by Chatterjee does not involve living tissue implantable devices] or to recognize the limitations of sintering

as a densification process, thereby leading to the Chatterjee failure to teach hot isostatic pressing. The Examiner finds that the sintering method taught by Chatterjee addresses the low-temperature degradation problem that is recognized by and addressed by Applicants when the Examiner states, "...Chatterjee et al. disclose a method ...thereby substantially eliminating low-temperature degradation of said polycrystal ceramic." [Office action, page 3, no. 5 first paragraph]

Chatterjee does not teach hot isostatic pressing as a densification method for stabilized tetragonal polycrystal ceramic [or for any material], nor does Chatterjee recognize the low-temperature degradation problem [nor would degradation be a problem in the applications taught by Chatterjee, which exclude implantable devices], and finally Chatterjee does not discuss the elimination of low-temperature degradation of said polycrystal ceramic.

This is not to say that Chatterjee does not recognize the difference between sintering and hot isostatic pressing. Two references cited by Chatterjee refer in their title to hot isostatic pressing of tetragonal zirconia. Despite these citations, Chatterjee does not teach this densification technique for the stabilized tetragonal polycrystal ceramic.

Whitehurst does not cure these defects when combined with Chatterjee. Whitehurst casually mentions "ceramic" at one point and only one point as follows, "The external surfaces of stimulator 150 may advantageously be composed of biocompatible materials. Capsule 152 may be made of, for instance, glass, ceramic, or other material that provides a hermetic package that will exclude water vapor ...." [Whitehurst col 16, lines 1-4]

The citation by Whitehurst allows the capsule to be composed of any biocompatible glass, any biocompatible ceramic, or any biocompatible other material that provides a hermetic package. This citation, that is relied on by the Examiner [Office action, page 4, 3rd line; quoting "...Whitehurst et al. teach that microstimulator housings can be made from ceramic...."] is not a teaching but rather is a vague and general reference that would not lead one skilled in the art to stabilized tetragonal polycrystal ceramic that has been hot isostatically pressed.

Further, there is no teaching to a densification method nor is there a teaching to hot isostatic pressing of "glass, ceramic, or other material."

The declaration by Jiang states that one skilled in the art would not confuse "sintering" with "hot isostatic pressing" as densification methods for materials. Attachment 1.

Independent claims 1, 10, 19, and 23 are allowable over Chatterjee and Whitehurst. The dependent claims are allowable as further limitations on allowable independent claims.

Claims 8, 9, 17, 18, 22, 24, 27, and 28 are rejected under 35 USC 103(a) as being unpatentable over Chatterjee, et al. (US Pat. no. 5,677,072) in view of Whitehurst, et al. (US Pat. no. 6, 735,475), further in view of Tsukuma, et al. (US Pat. no. 4,587,225).

These objections on new grounds are to dependent claims only. These claims are allowable as further limitations of the independent claims that they depend from.

In view of the foregoing, it is respectfully submitted that the pending claims 1-3 and 5-28 are allowable. Reexamination and allowance are respectfully requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California area telephone number (661) 702-6814 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

05/30/2008 /Gary Schnittgrund/

Date Gary Schnittgrund

Attorney for Applicant
Reg. No. 42,130

The Alfred E. Mann Foundation for Scientific Research
P.O. Box 905
Santa Clarita, California 91355
(661) 702-6814
(661) 702- 6710 (fax)